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FILE LAST UPDATED: 14 Nov 2001 (20011114/ED)

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=> s ditrimethylolpropane or di-tmp
      174 DITRIMETHYLOLPROPANE
      348838 DI
      3885 TMP
      0 DI-TMP
        (DI(W)TMP)
L1      174 DITRIMETHYLOLPROPANE OR DI-TMP

=> s l1 (L) acid decompos?
      3027461 ACID
      124382 DECOMPOS?
      1034 ACID DECOMPOS?
        (ACID(W)DECOMPOS?)
L2      0 L1 (L) ACID DECOMPOS?

=> s l1 and acid decomposition
      3027461 ACID
      112174 DECOMPOSITION
      694 ACID DECOMPOSITION
        (ACID(W)DECOMPOSITION)
L3      0 L1 AND ACID DECOMPOSITION

=> s l1 and mineral acid
      262601 MINERAL
      3027461 ACID
      7876 MINERAL ACID
        (MINERAL(W)ACID)
L4      0 L1 AND MINERAL ACID

=> s l1 and butyraldehyde and formaldehyde
      4584 BUTYRALDEHYDE
      104243 FORMALDEHYDE
L5      1 L1 AND BUTYRALDEHYDE AND FORMALDEHYDE

=> d
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L15 ANSWER 1 OF 52 CAPLUS COPYRIGHT 2001 ACS
AN 2001:673308 CAPLUS
DN 135:231517
TI Aqueous gelation agents containing esters of polyhydric alcohols with fatty acids
IN Santou, Yoshihito; Oyama, Keiichi; Tsuchiya, Takeshi
PA Nisshin Oil Mills Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001247845	A2	20010914	JP 2000-59561	20000303

=> d 115 11-52 ibib abs

L15 ANSWER 11 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:549328 CAPLUS
DOCUMENT NUMBER: 131:186312
TITLE: Multicomponent composite basecoat/topcoat coating compositions for application of automotive films having moisture resistance, low surface tension and minimal cratering
INVENTOR(S): Faler, Dennis L.; Glas, Djurdjica; Hille, Hans-Dieter; Jager, Michael; Metzger, Walter; Olson, Kurt G.; Pagac, Edward S.; Rardon, Daniel E.; Swarup, Shanti
PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9942529	A1	19990826	WO 1999-US3251	19990216
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9926812	A1	19990906	AU 1999-26812	19990216
US 6281272	B1	20010828	US 1999-250119	19990216
US 6291564	B1	20010918	US 1999-250671	19990216
PRIORITY APPLN. INFO.:			US 1998-75030 P	19980218
			WO 1999-US3251 W	19990216
AB	An aq. compn., useful as topcoat, base coat, or primer, includes .gtoreq.1 crosslinkable film-forming resins and .apprx.0.01-25% .gtoreq.1 amphiphilic adjuvants (acid value <30) including a water-sol. polar end having .gtoreq.1 terminal hydrophilic group selected from hydroxyl groups, carbamate groups, amide groups and urea groups; and a water-insol. hydrocarbon end having .gtoreq.7 contiguous C atoms, such as trimethylolpropane isostearate (OH value 274).			
REFERENCE COUNT:	6			
REFERENCE(S):	(1) Chemische Werke Huls; EP 0069839 A 1983 CAPLUS (2) Henkel; DE 2627320 A 1977 CAPLUS (3) PPG Industries Inc; WO 9405733 A 1994 CAPLUS (4) PPG Industries Inc; WO 9527013 A 1995 CAPLUS			

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 10265656	A2	19981006	JP 1997-73912	19970326
AB	Modifiers for improvement of coatability of resin or rubber moldings contain phenolic resins and other polymer polyols. Thus, a rubber sheet comprising EPT 3070 (EPDM) 100, Seast 116 140, Diana Process Oil PW 380 57, ZnO 5, stearic acid 1, Vesta PP (drying agent) 5, S 1.0, vulcanization accelerators 3.25, terephthalic acid -2,2-dipropyl-1,3-propanediol- ditrimethylolpropane copolymer 8, and PS 2608 (thermoplastic phenolic resin) 5 parts was coated with a urethane coating to give a test piece showing peeling strength 1.4 kg/cm2.				

L15 ANSWER 16 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:651092 CAPLUS
DOCUMENT NUMBER: 129:331972
TITLE: Polymer modifiers containing polyesters and nitrogen-containing compounds, polymer compositions, and their moldings
INVENTOR(S): Kitahara, Shizuo; Ikeda, Shinya
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 10265655	A2	19981006	JP 1997-73909	19970326
AB	Modifiers for improvement of coatability of resin and rubber moldings contain polyesters, which are obtained from polyhydric alcs. and polycarboxylic acids and show OH value .gtoreq.30 mg KOH/g and Mw 1000-500,000, and N-contg. compds. Thus, a rubber sheet comprising EPT 3070 (EPDM) 100, Seast 116 50, Diana Process Oil PW 380 60, ZnO 5, stearic acid 1, light CaCO3 60, S 1.0, vulcanization accelerators 3.25, terephthalic acid -2,2-dipropyl-1,3-propanediol- ditrimethylolpropane copolymer 10, and U-CAT SA 102 2 parts was coated with a urethane coating to give a test piece showing peeling strength 0.9 kg/cm.				

L15 ANSWER 17 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:650443 CAPLUS
DOCUMENT NUMBER: 129:317045
TITLE: Polyol, adhesive tackifier and nitrogen-containing compound composition as modifying agent for plastic and rubber
INVENTOR(S): Kitahara, Shizuo; Ikeda, Shinya
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 10265684	A2	19981006	JP 1997-73911	19970326
AB	The compn. is useful for prepn. of molded products and coating of polypropylene and high hydrocarbon rubber with good coatability. Thus, a modifier for 100 parts EPDM rubber was prepd. from 8:2:1 2,2-dipropyl-1,3-propanediol- ditrimethylolpropane -terephthalic				

acid copolymer polyol, QNT 1500 and reaction product of isostearic acid and tetraethylenepentamine mixt.

L15 ANSWER 18 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:509224 CAPLUS
DOCUMENT NUMBER: 129:162925
TITLE: Silicone/multifunctional acrylate barrier coatings
INVENTOR(S): Merlin, Patrick J.; Futter, Dan; Wyman, John E.;
Rangwalla, Imtiaz; Power, Gary; Branch, Karen
PATENT ASSIGNEE(S): Dow Corning Corp., USA; EG Technology Partners, Lp;
UCB Films PLC
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831720	A1	19980723	WO 1998-BE6	19980116
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9855443	A1	19980807	AU 1998-55443	19980116
AU 735818	B2	20010719		
EP 953000	A1	19991103	EP 1998-900484	19980116
R:	BE, DE, ES, FR, GB, IT			
BR 9806760	A	20000314	BR 1998-6760	19980116
JP 2001516373	T2	20010925	JP 1998-533432	19980116
PRIORITY APPLN. INFO.:			GB 1997-910	A 19970117
			GB 1997-964	A 19970117
			WO 1998-BE6	W 19980116

AB The invention is a compn. made by mixing a multifunctional acrylate with an amino-functional silane and an ethylenically unsatd. acid to form a reaction product, optionally dissolved in a solvent, characterized in that multifunctional acrylate has a mol. wt. of from about 100 to about 3000. The compn. can be coated on a substrate, then optionally exposed to moisture and treated to initiate a free radical reaction. The invention can be applied to a variety of substrates used in packaging applications to form coatings resistant to permeation by gases and aromas. The reaction mixt. can further be cured by heating in the presence of moisture. The free radical reaction can be initiated by electron beam irradiation, UV radiation, gamma radiation, and/or heat and chem. free radical initiators.

L15 ANSWER 19 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:314781 CAPLUS
DOCUMENT NUMBER: 129:68178
TITLE: Polyesters for modifying resins or rubbers
INVENTOR(S): Kitahara, Shizuo
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10130379	A2	19980519	JP 1996-288242	19961030

AB Title polyesters having wt. av. mol. wt. (Mw) 1000-500,000 comprising (a) acids based on arom. dicarboxylic acids and/or heterocyclic dicarboxylic acids and (b) polyols contg. .gtoreq.4-valent linear or branched polyols having .gtoreq.2 C linked to .gtoreq.2 CnH2nOH (n = 0-5). Manuf. of the polyesters; their use as modifiers to improved the adhesion resins or rubbers to substrates, coatings, and adhesives; and polymer compns. contg. the polyesters are also claimed. Thus, 20 parts 166.1:173.8:30.2 terephthalic acid-2-butyl-2-ethyl-1,3-propanediol-**ditrimethylolpropane** copolymer (Mw 8090) was added to a EPDM compn. contg. S, kneaded, and vulcanized to give a sheet, which was coated with Bond MOS 1010 (epoxy resin adhesive), dried at 60.degree. for 2 h, and left for 96 h to give a test piece showing peeling strength of the adhesive layer 1.1 kg/cm.

L15 ANSWER 20 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:197902 CAPLUS

DOCUMENT NUMBER: 128:218490

TITLE: Resin compositions, printing ink compositions, and printed products therewith

INVENTOR(S): Taniguchi, Nobuo; Yokoshima, Minoru

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP 10081719	A2	19980331	JP 1996-255336	19960906
AB	The resin compns. comprise (A) (meth)acrylate esters of reaction products of trimethylolactane (I) and alkylene oxides, (B) other unsatd. group-contg. compds., and (C) photoinitiators and are blended with pigments to give the ink compns. having excellent removability and resistance to emulsification by dampening water, useful for lithog. printing. Thus, 259 parts acrylic acid was esterified with 292 parts I-ethylene oxide (2 mol) adduct in PhMe in the presence of p-toluenesulfonic acid and hydroquinone and then the resulting product was neutralized with NaOH and mixed with p-methoxyphenol and PhMe was evapd. to give 422 parts an ester (II). A UV-curable ink comprising II 30, ditrimethylolpropane tetraacrylate 5, Ph2CO 7, isoamyl p-dimethylaminobenzoate 7, Bright Red (pigment) 18, methylhydroquinone 0.01, and Nikanol HP 100 (xylene resin) 32 parts showed no emulsification by dampening water, good curability, and good dispersibility with kerosene.				

L15 ANSWER 21 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:143531 CAPLUS

DOCUMENT NUMBER: 128:206024

TITLE: Compositions for coating of aromatic polycarbonate molded products

INVENTOR(S): Higuchi, Toshihiko; Kondo, Satoshi; Yamamoto,

Hirotsugu; Sanegiri, Yukio

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP-10060306	A2	19980303	JP 1996-213897	19960813
AB	The compns., forming films with good resistance to scratching and hot bending, comprise (A) multifunctional monomers having .gtoreq.3				

(meth)acryloyl groups, (B) bifunctional monomers with m.p. .gtoreq.0.degree. having 2 (meth)acryloyl groups and urethane linkages, (C) 0.1-30 parts (vs. 100 parts A + B) UV absorbers, and (D) 0.1-20 parts (same as above) photoinitiators. Arom. polycarbonate molded products coated with the compns. and hot bending process of the coated products are also claimed. Thus, a compn. comprising a urethane acrylate (m.p. 28.degree.; prepd. by reaction of bisphenol A-ethylene oxide adduct 1, HDI 2, and 2-hydroxyethyl acrylate 2 mol) 50, dipentaerythritol hexaacrylate 50, Me2CHOH 60, BuOAc 60, Et cellosolve 30, 1-hydroxycyclohexyl Ph ketone 5, octyl 3-[3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl]propionate 3, and bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate 1 g was applied on an arom. polycarbonate plate, dried, and irradiated with UV to form a coating showing good scratching resistance, no cracks after bending at 170.degree., and no changes after 2000-h accelerated weathering.

L15 ANSWER 22 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:71425 CAPLUS
DOCUMENT NUMBER: 128:155621
TITLE: Electrically insulated wires having surface lubricity
INVENTOR(S): Tamura, Kazue; Nishida, Shigeo; Honda, Noritsugu
PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10021752	A2	19980123	JP 1996-169870	19960628

OTHER SOURCE(S): MARPAT 128:155621

AB The lubricating layers of the wires are obtained by applying coatings contg. aliph. esters having ether linkage and S atom on conductors directly or via elec. insulating layers and baking the coatings. The wires are useful for coils of deflecting yokes. Thus, a poly(ester imide)-insulated wire was coated and baked 3 times with a compn. of a polyamide (Daamid 451) 180, cresol 504, xylene 216, and dipentaerythritol hexa(3-dodecylthiopropionate) 5.4 g to give a self-fusible insulated wire showing dielec. breakdown voltage 9.5 kV, static friction coeff. 0.04, and good appearance, adhesion, and mold releasability.

L15 ANSWER 23 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:8676 CAPLUS
DOCUMENT NUMBER: 128:116381
TITLE: Water-washable active energy ray-curable resin compositions for coatings and adhesives with good water and solvent resistance
INVENTOR(S): Imai, Toshiyuki; Katayama, Shinichi; Chouno, Tetsu
PATENT ASSIGNEE(S): Arakawa Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09328525	A2	19971222	JP 1996-168206	19960607
JP 3090047	B2	20000918		

AB Title compns. comprise 1-80% reactive diluents, 0-70% reactive oligomers, and 0-10% photopolymn. initiators, and 20-99% polyurethane (meth)acrylates prepd. from OH-contg. (meth)acrylic acid esters, org. polyisocyanates, and OH-contg. polyethylene glycol. Thus, a polyurethane acrylate [prepd. from hydroxypropyl acrylate 145.4, Coronate HX

(hexamethylene diisocyanate trimer) 330.8, and Methoxy PEG 400 (polyethylene glycol monomethyl ether) 223.7 parts] 50, **ditrimethylolpropane** tetraacrylate 50, and Irgacure 184 3 parts were mixed, applied on a glass plate, and cured by UV irradiation to form a film showing good water resistance and solvent resistance.

L15 ANSWER 24 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:754318 CAPLUS
DOCUMENT NUMBER: 128:90908
TITLE: Tertially carboxylate ester compounds and lubricating oil compositions containing them
INVENTOR(S): Yanagisawa, Yoshinori; Tsubouchi, Toshiyuki; Hashimoto, Katsumi; Okuda, Ryoichi
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 09301919	A2	19971125	JP 1996-117427	19960513
AB	Claimed compds. are obtained from C.gtoreq.13 tert-carboxylic acids and hindered alcs. Claimed lubricating oils comprise C.gtoreq.13 tert-carboxylate ester compds. for uses under air atm. The lubricating oils have high viscosity index and oxidn. resistance, and are esp. suitable for turbine oils, compressor oils, engine oils, gear oils, and bearing oils.				

L15 ANSWER 25 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:371662 CAPLUS
DOCUMENT NUMBER: 127:18938
TITLE: Polyester- or polyurethane-coated soilproofing sheets
INVENTOR(S): Koizumi, Kazuhisa; Maruyama, Tsutomu
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 09087545	A2	19970331	JP 1995-242850	19950921
AB	The title sheets, useful for soilproofing pressure-sensitive adhesive sheets, are prepd. by applying acrylic polyesters (e.g., acrylic acid -dipentaerythritol-succinic acid copolymer, acrylic acid -adipic acid dipentaerythritol copolymer, acrylic acid -succinic acid - ditrimethylolpropane copolymer) or acrylic polyurethanes (e.g., pentaerythritol diacrylate-TDI copolymer) contg. 1-10 phr Si compds. (e.g., SH 200, trimethoxymethylsilane, FQF 501, TSF 484) on base sheets [e.g., of PET, PVC, poly(butylene terephthalate)].				

L15 ANSWER 26 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:279128 CAPLUS
DOCUMENT NUMBER: 126:251918
TITLE: Polybutylene terephthalate composition pellets with good molding stability
INVENTOR(S): Fuje, Hiroki; Akagi, Noryuki
PATENT ASSIGNEE(S): Teijin Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 09053005	A2	19970225	JP 1995-209504	19950817
AB	Title compns., useful for molding materials contg. .gtoreq.70% the compns., contain 95-99.9% PBT and 0.1-5% mixed esters prepd. from C24-40 long-chained aliph. monocarboxylic acids, C2-12 dicarboxylic acids, and C3-12 C polyols having 3-6 OH. Thus, 99.4% PBT prepd. from di-Me terephthalate and 1,4-butanediol and 0.5% a mixed ester prepd. from montanic acid 402.7, trimethylolpropane 67.1, and adipic acid 29.2 g were mixed, kneaded, pelletized, and molded to give a test piece showing tensile strength 50 MPa, elongation 180%, bending elasticity 2450 MPa, impact strength 45 J/m, and good mold releasability and molding stability.				

L15 ANSWER 27 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:226566 CAPLUS
DOCUMENT NUMBER: 126:213421
TITLE: Surface-treated color pigment, colored substrate particles and production process thereof
INVENTOR(S): Hashizume, Yoshiki; Kobayashi, Satoshi
PATENT ASSIGNEE(S): Toyo Aluminium Kabushiki Kaisha, Japan
SOURCE: Eur. Pat. Appl., 30 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	EP 755986	A2	19970129	EP 1996-305451	19960725
	EP 755986	A3	19980415		
	EP 755986	B1	20010912		
	R: DE, FR, GB				
	JP 09040885	A2	19970210	JP 1995-192098	19950727
	JP 09071734	A2	19970318	JP 1995-228227	19950905
	JP 09124973	A2	19970513	JP 1995-280461	19951027
	JP 09208867	A2	19970812	JP 1996-16705	19960201
	US 5912283	A	19990615	US 1996-683883	19960719
	US 6022911	A	20000208	US 1999-231550	19990115
PRIORITY APPLN. INFO.:				JP 1995-192098	A 19950727
				JP 1995-228227	A 19950905
				JP 1995-280461	A 19951027
				JP 1996-16705	A 19960201
				US 1996-683883	A3 19960719
AB	A pigment (100 parts) is coated with 0.2-100 parts surface-treatment agent selected from monobasic arom. carboxylic acids and amino compds. having 2 amino groups in its mol. and no carboxyl group. Thus, Irgazin DPP Red BO 1, benzoic acid 0.5, and mineral spirit 10 g were milled, mixed with 11.4 g MG 1000 Al paste and 20 g mineral spirit, and milled to give Al flakes coated with 0.07 g/m2 red pigment.				

L15 ANSWER 28 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:90504 CAPLUS
DOCUMENT NUMBER: 126:105497
TITLE: Resin-coated metallic pigment and metallic coating material containing the pigment
INVENTOR(S): Takase, Shunsuke; Imasato, Yasunobu; Hayami, Shinji
PATENT ASSIGNEE(S): Asahi Kasei Metals Limited, Japan; Takase, Shunsuke; Imasato, Yasunobu; Hayami, Shinji
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9638506	A1	19961205	WO 1996-JP1450	19960529
W: CN, DE, JP, KR, US				
CN 1185798	A	19980624	CN 1996-194273	19960529
TW 425419	B	20010311	TW 1996-85106386	19960529

PRIORITY APPLN. INFO.: JP 1995-131828 A 19950530

AB A resin-coated metallic pigment is prepd. by using (A) .gtoreq.1 radical-polymerizable unsatd. carboxylic acids, mono- and di-esters of phosphoric **acid** and phosphonic **acid** each having a radical-polymerizable double bond and coupling agents each having a radical-polymerizable double bond, (B) a monomer having .gtoreq.3 radical-polymerizable double bonds and (C) a polymn. initiator, according to a process characterized by treating a metallic pigment with the component A and thereafter forming a resin layer on the surface of the resulting pigment by gradually adding the component B and/or C to cause polymn.; the products are excellent in weather resistance, chem. resistance, gloss and storage stability in aq. coating materials and permits the formation of metallic finish. Acrylic **acid**, trimethylolpropane trimethacrylate, and **ditrimethylolpropane** tetraacrylate were polymd. in the presence of an Al paste in mineral spirit, and the resulting coated pigment was used in Acrylic A-166 coatings.

L15 ANSWER 29 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:733552 CAPLUS

DOCUMENT NUMBER: 125:331717

TITLE: Resin compositions curable by active energy rays with good adhesion strength and scratch resistance

INVENTOR(S): Kageyama, Masaya; Imai, Toshuki; Matsumoto, Keizo

PATENT ASSIGNEE(S): Arakawa Chem Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08239435	A2	19960917	JP 1995-77214	19950307

AB The compns. contain (A) 5-70% diols, i.e. addn. products of 1 mol part diepoxy compds. with 2 mol parts monobasic acids (mixts. of 0.5-1.5 mol parts C15-22 linear satd. aliph. hydrocarbon residue-contg. monobasic acids and 0.5-1.5 mol parts other monobasic acids) and/or polyurethanes as addn.-condensation products of the diols with diisocyanates, (B) 30-95% reactive diluents, (C) 0-10% additives, and (D) 0-20% photopolymn. initiators. Thus, treatment of stearic **acid** 83, disproportionated rosin 246, and bisphenol A diglycidyl ether (epoxy equiv. 190) 186 parts in the presence of PPh3 and treatment of the product with 85 parts hydrogenated xylene diisocyanate in the presence of Sn 2-ethylhexanoate gave a polyurethane. Then, 35 parts of the polyurethane was mixed with **ditrimethylolpropane** tetraacrylate 50, Beamset 750 (bisphenol A tetraethylene glycol diacrylate) 15, Irgacure 184 5, metoquinone 0.05, and PhMe 105 parts to give a compn., which was spread on paper and cured by UV irradsn. showing good adhesion strength and scratch resistance.

L15 ANSWER 30 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:642935 CAPLUS

DOCUMENT NUMBER: 125:331625

TITLE: Urethane acrylic oligomers

AUTHOR(S): Anon.

CORPORATE SOURCE: UK

SOURCE: Res. Discl. (1996), 390, P 663-P 664 No. 39032
CODEN: RSDSBB; ISSN: 0374-4353

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Urethane acrylic oligomers for lacquers were prepd. from acrylic acid, TDI, tripropylene glycol diacrylate, and a no. of tri- or polyfunctional alcs. as base polyols. **Ditrimethylolpropane** gave the highest viscosity and pendulum hardness but the poorest flexibility. Increased the degree of alkoxylation gave decreased viscosity and pendulum hardness but increased flexibility. The polyethoxylated polyalcs. gave very good surface hardness.

L15 ANSWER 31 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:579814 CAPLUS

DOCUMENT NUMBER: 125:208519

TITLE: Reversible thermal recording material containing dicarboxylic acid and diester

INVENTOR(S): Ogawa, Tatsuya; Oosawa, Haruhiko; Koizumi, Shinichi; Fujita, Minoru

PATENT ASSIGNEE(S): Kyodo Printing Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08175032	A2	19960709	JP 1994-321980	19941226

OTHER SOURCE(S): MARPAT 125:208519

AB The recording layer of the material comprises a resin, a dicarboxylic acid, and a diester ROCO(CH₂)_nCOOR₁ (R, R₁ = C₁₄-32 alkyl, n = 14-22). The material is transparent for wide temp. range, recordable at higher temp., and shows high contrast.

L15 ANSWER 32 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:134352 CAPLUS

DOCUMENT NUMBER: 124:180903

TITLE: Lubricating oils containing polyol-polyoxyalkylene fatty esters

INVENTOR(S): Kimura, Hiroshi; Sakuma, Kohei

PATENT ASSIGNEE(S): Lion Corp, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07305079	A2	19951121	JP 1994-123177	19940512

AB The products comprise polyether polyol fatty acid esters obtained from alkylene oxide 1-10 mol adducts of divalent-hexavalent neopentyl polyols having no H atoms at .beta.-site carbon by esterification with C₈-22 fatty acids. The neopentyl polyols may be neopentyl glycol, trimethylolpropane, trimethylolbutane, trimethylolhexane, **ditrimethylolpropane**, pentaerythritol, and/or dipentaerythritol. The alkylene oxide may be ethylene oxide, propylene oxide, isopropylene oxide, butylene oxide, and/or isobutylene oxide. The fatty acids may be caprylic acid, capric acid, undecanoic acid, lauric acid, myristic acid, palmitic acid, isostearic acid, oleic acid, arachidic acid, behenic acid, and/or its lower alkyl esters. The products, esp. suitable for rolling oils and engine oils, etc., have good thermal stability, oxidn. stability,

low-temp. flowability, and lubrication.

L15 ANSWER 33 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1995:300332 CAPLUS

DOCUMENT NUMBER: 122:240774

TITLE: Ditrimehtylolpropane-modified lactone polymers and

their manufacture

INVENTOR(S): Tabuchi, Takeharu; Matsui, Hideki

PATENT ASSIGNEE(S): Daicel Chem, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 06293824	A2	19941021	JP 1993-83166	19930409
AB	EtC(CH ₂ OZ ₁ H)(CH ₂ OZ ₃ H)OCeT(CH ₂ OZ ₂ H)(CH ₂ OZ ₄ H) [Z ₁ = [CO(CR ₁ R ₂)xO]l; Z ₂ = [CO(CR ₁ R ₂)xO]m; Z ₃ = [CO(CR ₁ R ₂)xO]n; Z ₄ = [CO(CR ₁ R ₂)xO]k; R ₁ -2 = H, Me, Et; x = 3-7; l, m, n, k = 0-100; l + m + n + k = 1-100], useful for urethanes or coatings (no data), are manufd. by ring-opening polymn. of C4-8 lactones with ditrimethylolpropane (I). Thus, 517.7 parts .epsilon.-caprolactone was polymd. with 582.2 parts I in the presence of Sn octylate at 200.degree. for 7 h to give lactone polymer having hue (APHA) 90, acid value 1.22 KOH mg/g, OH value 453.8 KOH mg/g, mol. wt. 494, water content 0.059%, and viscosity 10,813 cp (25.degree.).				

L15 ANSWER 34 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1994:137301 CAPLUS

DOCUMENT NUMBER: 120:137301

TITLE: Active energy ray-curable water-based overcoat varnishes

INVENTOR(S): Sato, Koji; Tatenno, Hiroyuki

PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 05202317	A2	19930810	JP 1992-34457	19920124
AB	The title water-washable varnishes with swelling resistance contain water-sol. or water-dispersible (meth)acrylic monomers contg. OH, carboxyl groups (alkali metal salts), carboxylic acid amide groups, sulfonate groups (alkali metal salts), epoxide groups, or ether groups and H ₂ O and optional water-sol. or water-dispersible radical polymerizable prepolymers or non-radical polymerizable resins, and active energy ray-curable initiators. Thus, a coating composed of bisphenol A ethylene oxide adduct (1:4) monoacrylate 40.0, ditrimethylolpropane phthalic acid ester triacrylate 39.4, Irgacure 907 2, Irgacure 184 3, KM 788 (slipping agent) 0.5, FS Antifoam 013B (antifoaming agent) 0.1, and H ₂ O 15% was applied onto a paper and irradiated by 120-W/cm high pressure mercury lamp to give a test piece with smooth surface, water washability, and swelling resistance.				

L15 ANSWER 35 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1993:581545 CAPLUS

DOCUMENT NUMBER: 119:181545

TITLE: Polyester-type dendritic macromolecules, and their manufacture and use

INVENTOR(S): Hult, A.; Malmstroem, E.; Johansson, M.; Soerensen, K.

PATENT ASSIGNEE(S): Perstorp AB, Swed.

SOURCE: Swed., 20 pp.
CODEN: SSXXAY
DOCUMENT TYPE: Patent
LANGUAGE: Swedish
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SE 468771	B	19930315	SE 1992-564	19920226
SE 9200564	A	19930315		
SE 468771	C	19930715		
WO 9317060	A1	19930902	WO 1993-SE148	19930224
W:	AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US			
RW:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG			
AU 9336530	A1	19930913	AU 1993-36530	19930224
EP 630389	A1	19941228	EP 1993-905712	19930224
EP 630389	B1	19980429		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE			
JP 07504219	T2	19950511	JP 1993-514755	19930224
JP 2574201	B2	19970122		
AT 165609	E	19980515	AT 1993-905712	19930224
ES 2115762	T3	19980701	ES 1993-905712	19930224
CA 2117486	C	19980922	CA 1993-2117486	19930224
US 5418301	A	19950523	US 1994-256493	19940713
PRIORITY APPLN. INFO.:			SE 1992-564	19920226
			WO 1993-SE148	19930224

AB The macromols., consisting of a central initiator mol. or polymer contg. .gtoreq.1 reactive groups (A), which groups A are bonded with reactive groups (B) of a chain-lengthening monomer to form a 1st, both A and B group-contg. treelike structure that may be further lengthened and branched out from the initiator mol. or polymer by addnl. monomeric chain-lengtheners via bonding to the A and B groups, and, optionally, also further lengthened by reaction with a chain stopper, A and B are hydroxyl A and carboxyl groups, resp., and the chain-lengthening monomer contains a group B and .gtoreq.2 groups A or hydroxyalkyl-substituted A. The macromols. are manufd. by reacting an initiator mol. or polymer contg. .gtoreq.1 hydroxyl groups at 0-280, preferably 100-250.degree., with a chain-lengthening monomer contg. a group B and .gtoreq.2 groups A or hydroxyalkyl-substituted A, after which the reaction products may be reacted with a chain stopper. The macromols. are used as components in alkyd resins, satd. and unsatd. polyesters, epoxy resins, polyurethanes, UV-curable binders, dental materials, lubricants, microlithog. pigments, powd. binders, and amino resins. To 1.0 mol di-trimethylolpropane were added, under flowing Ar and at 120.degree., 8.0 mol dimethylolpropionic acid and 0.12 mol p-toluenesulfonic acid, and the reaction was carried out at 140.degree. for 2 h, after which 8.0 mol lauric acid were added and the reaction continued for 2 h to give a polyester having viscosity 10 Pa.s at 23.degree.. Addn. of 4.0 and 12.0 mol lauric acid gave viscosity 1037 and 1.5 Pa.s, resp.

L15 ANSWER 36 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1993:430044 CAPLUS
DOCUMENT NUMBER: 119:30044
TITLE: One-package, stable, etch-resistant thermosetting acrylic coatings and their application
INVENTOR(S): McMonigal, Susan U.; Singer, Debra L.; Simpson, Dennis A.; Klanica, Joseph A.; Mayo, Michael A.
PATENT ASSIGNEE(S): PPG Industries, Inc., USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9219660	A1	19921112	WO 1992-US2872	19920406
W: AU, CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
US 5196485	A	19930323	US 1991-692885	19910429
AU 9219162	A1	19921221	AU 1992-19162	19920406
AU 652704	B2	19940901		
EP 582663	A1	19940216	EP 1992-911612	19920406
EP 582663	B1	19981223		
R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE				
JP 06504314	T2	19940519	JP 1992-511387	19920406
CA 2109104	C	19960423	CA 1992-2109104	19920406
AT 174938	E	19990115	AT 1992-911612	19920406
US 5256452	A	19931026	US 1992-976062	19921113
KR 124514	B1	19971126	KR 1993-73403	19931028

PRIORITY APPLN. INFO.:

US 1991-692885 A 19910429
 WO 1992-US2872 A 19920406

AB One-package, stable compns. for the manuf. of clearcoats with softening point .gtorsim.20.degree.C in basecoat-clearcoat systems for automobiles contain a polyepoxide having epoxy equiv. wt. .ltorsim.600 and a polyacid with av. acid functionality >2. The clearcoats exhibit good resistance to water spotting and acid and are cured in the absence of a basic esterification catalyst. Thus, a compn. contg. Tinuvin 328, Tinuvin 292, poly(Bu acrylate) flow-control agent, Et 3-ethoxypropionate, Bu methacrylate-glycidyl methacrylate-Me methacrylate-methylstyrene dimer-styrene copolymer (epoxy equiv. wt. 237), and **ditrimethylolpropane** tetrakis(methylhexahydrophthalic anhydride half-ester) exhibited #4 Ford cup viscosity gain 8 s (at 75.degree.F) after 16 h at 140.degree.F and provided a thermoset coating with good resistance to tapwater spotting and aq. H2SO4 on a black basecoat on electrophoretically primed steel.

L15 ANSWER 37 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:550548 CAPLUS
 DOCUMENT NUMBER: 117:150548
 TITLE: Process for the production of ditrimethylolpropane
 INVENTOR(S): Sjoegreen, Carl Axel; Axelsson, Goeran
 PATENT ASSIGNEE(S): Perstorp AB, Swed.
 SOURCE: PCT Int. Appl., 18 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9205134	A1	19920402	WO 1991-SE589	19910909
W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
SE 9003016	A	19920325	SE 1990-3016	19900924
SE 468714	B	19930308		
SE 468714	C	19930708		
AU 9186594	A1	19920415	AU 1991-86594	19910909
EP 550611	A1	19930714	EP 1991-917620	19910909
EP 550611	B1	19951227		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06501470	T2	19940217	JP 1991-516237	19910909
JP 2952040	B2	19990920		
AT 132126	E	19960115	AT 1991-917620	19910909
ES 2084184	T3	19960501	ES 1991-917620	19910909
US 5324863	A	19940628	US 1993-30020	19930324

PRIORITY APPLN. INFO.:

SE 1990-3016
WO 1991-SE589

19900924
19910909

AB The title compd. (I) is prepd. by etherification of trimethylolpropane (II) and/or a partial ester of II at 50-200.degree. in the presence of an acid catalyst. The reaction is carried out until at most 30% of free and/or esterified II is converted to I and/or partial ester, with water removed continuously by azeotropic distn. in vacuo.

L15 ANSWER 38 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:108504 CAPLUS

DOCUMENT NUMBER: 116:108504

TITLE: Activated energy-curable epoxy resin compositions for coatings and inks

INVENTOR(S): Matsuda, Yukio; Sato, Koji

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03160059	A2	19910710	JP 1989-299347	19891117

AB The title compns., with good misting resistance, gloss and strength, comprise epoxy resin esters with monocarboxylic acids contg. branched alkyl or branched alkyl ester groups and radically polymerizable monomers and optionally radical initiators. Thus, Epikote 828 62.5, isomyristic acid 37.5, and triethylenediamine 0.1 part were stirred at 260.degree., mixed with benzophenone and hydroquinone, and stirred with 25 parts SR 355 (ditrimethylolpropane tetraacrylate) to give a resin. Then, the resin 32.0, polyoxyethylene bisphenol A diacrylate 35.9, 4,4-bis(diethylamino)benzophenone-benzophenone mixt. 7.0, and Finess Red F2BW 25.0 parts were roll milled to give an ink showing no misting and forming prints with pencil hardness 5H.

L15 ANSWER 39 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:31517 CAPLUS

DOCUMENT NUMBER: 116:31517

TITLE: Radiation-curable decoloring agents for pressure-sensitive copying paper

INVENTOR(S): Yamashita, Yoshiyuki; Ishii, Hiroyuki

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02190382	A2	19900726	JP 1989-10265	19890119

AB Decoloring agents contain .gtoreq.4:1 poly(alkylene oxide) adduct of ethylenediamine esterified with .gtoreq.1 mol (meth)acrylic acid. These agents can be rapidly cured, and are effective in application on sheets contg. salicylic acid-contg. developers. Thus, a decoloring ink was prepd. from 1:4 ester of 1:4 ethylenediamine-butylene oxide adduct with acrylic acid 60, ditrimethylolpropane tetraacrylate 28, benzylmethylketal 2, and TiO2 30 parts. This ink was used for printing on color developer sheet of pressure-copying system, and showed rapid curing by UV lamp and complete decoloring.

L15 ANSWER 40 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1991:494605 CAPLUS

DOCUMENT NUMBER: 115:94605

TITLE: UV-curable resin compositions for inks
INVENTOR(S): Yokoshima, Minoru; Ozaki, Toru
PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02284908	A2	19901122	JP 1989-104714	19890426

AB The title compns. useful for offset printing inks comprise (A) acrylate esters of poly(ethylene oxide) bisphenol A (or F) ethers contg. .gtoreq.70% R(p-C6H4OCH2CH2OH)2 (I: R = CH2, CMe2), (B) other ethylenically unsatd. monomers, and optionally (C) photoinitiators. Thus, 280 parts BPE 20 [contg. 82.5% I (R = CH2)] was esterified with 216 parts acrylic **acid** to give 360 parts ester, 40 parts of which was blended with **ditrimethylolpropane** tetraacrylate 10, Neopolymer 120 18, methylhydroquinone 0.1, Bright Red 18, benzophenone 7, and isoamyl p-dimethylaminobenzoate to give an ink. A milk packaging paper was printed with the ink and irradiated by UV to form prints with excellent adhesion.

L15 ANSWER 41 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1990:574218 CAPLUS
DOCUMENT NUMBER: 113:174218
TITLE: Radiation-curable coating compositions and printing ink compositions containing diallyl ester polymers
INVENTOR(S): Ishii, Hiroyuki; Takayama, Michio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02166170	A2	19900626	JP 1988-321652	19881220

AB UV- and electron beam-curable title compns. with good offset printability comprise (A) solid dibasic **acid** diallyl ester polymers, (B) polyfunctional oligomers prepd. from dibasic acids and/or their anhydrides, pentaerythritol (I), and (meth)acrylic **acid** and having dibasic **acid**-based units, and optionally (C) pentaerythritol tetraacrylate (II). Thus, phthalic anhydride 1, I 2.2, and acrylic **acid** 6.5 mol were treated in toluene in presence of H2SO4 and phenothiazine at 95-110.degree. to give an oligomer (III, av. mol. wt. 1300), 60 parts of which was mixed with 40 parts II, then 75 parts of the mixt. was blended with 25 parts diallyl o-phthalate resin to give a vehicle. A varnish contg. SiO2 2.0, Irgacure 907 3.0, the vehicle 65.0, dipentaerythritol hexaacrylate (IV) 15.0, and **ditrimethylolpropane** tetraacrylate 15.0 parts was applied on paper and irradiated by UV to form a coating with pencil hardness 6H, vs. 4H for the coating prepd. using IV instead of II-III mixt.

L15 ANSWER 42 OF 52 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1989:77657 CAPLUS
DOCUMENT NUMBER: 110:77657
TITLE: Photocurable coating compositions and synthetic resin moldings using the same
INVENTOR(S): Kawakami, Shigenao; Jinno, Takuhiko; Takatsuka, Yasuo
PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63168419	A2	19880712	JP 1986-311270	19861229
JP 2583041	B2	19970219		

OTHER SOURCE(S): MARPAT 110:77657

AB The title compns. forming hard, weather-, heat-, and abrasion-resistant flexible coatings with excellent adhesion on plastic moldings contain 20-75 parts polyfunctional monomer contg. .gtoreq.4 OH groups, .gtoreq.3 of which are substituted by acryloyloxy groups, 10-60 parts .gtoreq.1 polyfunctional acrylate from dipentaerythritol, tripentaerythritol, **ditrimethylolpropane**, or ditrimethylolethane, dicarboxylic acids, and acrylic **acid**; polyester acrylate from pentaerythritol, tricarboxylic acids, and acrylic **acid**; and polyfunctional urethane acrylate from polyisocyanates and OH group-contg. polymerizable acrylic monomers, and 3-40 parts difunctional acrylate $\text{CH}_2:\text{CHCO}(\text{OCHRCH}_2)\text{nOXCM}_2\text{XO}(\text{CH}_2\text{CHRO})\text{nCOCH}:\text{CH}_2$ (X = phenylene, cyclohexylane; R = H, Me; n = 1-5), and this mixt. (100 parts) also contain 0.01-5 parts hindered cyclic amine-type light stabilizer and 0.01-5 parts antioxidant. A compn. from dipentaerythritol hexaacrylate 20, 0.5:0.26:2.0 (molar) dipentaerythritol-hexahydrophthalic anhydride-acrylic **acid** ester 20, bisphenol A ethoxylate diacrylate 10, 50:50 isopropanol-toluene 50, 1-hydroxycyclohexyl Ph ketone 2, bis(2,2,6,6-tetramethyl-4-piperidyl) sabacate 0.6, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 0.12, and 2-hydroxy-4-methoxybenzophenone 0.2 part was dip-coated on a transparent polycarbonate plate and UV-irradiated to give a coating with the above desirable properties.

L15 ANSWER 43 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1988:475360 CAPLUS
DOCUMENT NUMBER: 109:75360
TITLE: Acrylate coating compositions and coated moldings therefrom
INVENTOR(S): Kawakami, Shigenao; Jinno, Takuhiko; Takatsuka, Yasuho
PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63039931	A2	19880220	JP 1986-184486	19860805
JP 07023431	B4	19950315		

AB Title moldings, with good weather and wear resistance, are prepd. by coating acrylate polymer compns. from .gtoreq.3 acryloyloxy substituted-contg. polyols 20-75, polyfunctional acrylate from dipentaerythritol (I), tripentaerythritol, **ditrimethylolpropane**, or ditrimethylolethane, dicarboxylic acids, and acrylic **acid** (II) or reaction products from polyisocyanates and OH-contg. acrylic monomers 10-60, and mono(or di) acrylate 0-40 parts with stabilizers onto a substrate and UV curing. Thus, a mixt. of 0.5:0.26:296 mol ratio I-adipic **acid**-II copolymer 24, 0.5:0.26:2.6 mol ratio I-succinic **acid**-II copolymer 24, 1:1 PhMe-isopropanol mixt. 112, and additive and stabilizers 3.408 parts was applied onto 2-mm PVC and cured with a 120-W UV -lamp for 5 s at 100 mm to give a sample having wear resistance A with transparency after a 300-h weathering test and a heat cycle test at 65.degree. (hot water 1 h-ice water 10 min-80.degree. hot air 1 h for 5 times) and good adherence.

L15 ANSWER 44 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1987:535970 CAPLUS
 DOCUMENT NUMBER: 107:135970
 TITLE: Acrylic coating compositions and coating method
 INVENTOR(S): Yamazaki, Takeshi; Fukahori, Keiko
 PATENT ASSIGNEE(S): Koei Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62053379	A2	19870309	JP 1985-194086	19850902

AB Title compns., which are UV-curable by addn. of photosensitizers and afford products having good hardness, comprise 20-75% polyol tri- or higher acrylates (from polyols having gtoreq.4 OH), 10-60% polyester acrylates [prepd. by esterification of acrylic **acid** (I), diacids, dipentaerythritol (II) **ditrimethylolpropane** and/or ditrimethylolethane], and 0-40% monoacrylates having b.p. $\text{gtoreq.150.degree.}$ and viscosity (at $25.\text{degree.}$) ltoreq.10 cPs . Thus, 30 parts II hexaacrylate, 20 parts tetrahydrofurfuryl acrylate, and 50 parts polyester acrylate (prepd. from I, II and adipic **acid**) were mixed with photosensitizer and solvent to form a compn., which was spread on a resin plate, and irradiated by UV for 5 s to form a film showing excellent adhesion, abrasion resistance and hardness (6H), but a film prepd. using $\text{CH}_3\text{C}(\text{CH}_2\text{OH})_3$ instead of II showed less abrasion resistance and hardness.

L15 ANSWER 45 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1986:573718 CAPLUS
 DOCUMENT NUMBER: 105:173718
 TITLE: Acrylic or methacrylic acid esters as reactive diluents
 INVENTOR(S): Okubo, Tetsuo; Yokoshima, Minoru
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61148140	A2	19860705	JP 1984-268438	19841221

AB An acrylic reactive diluent for a radiation-curable coating or ink giving a flexible layer comprises a condensation product of **ditrimethylolpropane** (I) and ϵ -caprolactone (II) which is treated with (meth)acrylic **acid**. Thus, 250 parts I was treated with 228 parts II in the presence of 0.11 part $\text{Ti}(\text{OBu-iso})_4$ at $150\text{-}160.\text{degree.}$ to give a liq. condensation product with OH value 469.7 and **acid** value 3.4, 478 parts of which was treated with 345.9 parts acrylic **acid** in 360 parts benzene and 90 parts cyclohexane in the presence of 10.4 parts H_2SO_4 and 2.6 parts hydroquinone at $83\text{-}88.\text{degree.}$ to give an acrylate with sapon. value 483.5, **acid** value 0.02, and viscosity 522.5 cP at $25.\text{degree.}$. A compn. comprising Epikote 828 acrylate 30, the above acrylate 70, and Irgacure 184 (photoinitiator) 5.0 parts was coated on a primed steel plate to a thickness of 25 μm . and UV-cured to give a layer withstanding $90.\text{degree.}$ flexure without cracking. When trimethylolpropane was used as a reactive diluent, a formed coating layer exhibited cracks during the flexure test.

L15 ANSWER 46 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1986:538651 CAPLUS

DOCUMENT NUMBER: 105:138651
 TITLE: Organic binders for sintered bodies and manufacture of sintered bodies
 INVENTOR(S): Shimomura, Takatoshi; Yamazaki, Takeshi; Hama, Masaaki; Watanabe, Keiichiro
 PATENT ASSIGNEE(S): Koei Chemical Industry Co., Ltd., Japan; Sumitomo Chemical Co., Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61077660	A2	19860421	JP 1984-199128	19840921

AB In manufg. inorg. sintered bodies by kneading inorg. powder with binders, compacting, degreasing, and firing, higher fatty **acid** esters of polyhydric alcs. of general formula $RCH_2C(CH_2R_1)(CH_2R_2)CH_2[OCH_2C(CH_2R_3)(CH_2R_4)CH_2]_n-1R_5$ [R_1-5 .gtoreq.1 R_6CO_2 groups ($R_6 = C_7-23$ alkyl), or OH, $n = 1-5$], or $R_7CH_2CR_8(CH_2R_9)CH_2[OCH_2CR_8(CH_2R_{10})CH_2]_m-1R_{11}$ [$R_7-R_{11} = R_1-5$, $R_8 = Me$ or Et , $m = 1-5$]. The polyhydric alc. is preferably selected from trimethylolpropane, **ditrimethylolpropane**, pentaerythritol, dipentaerythritol and tripentaerythritol. The higher fatty **acid** is preferably selected from capric, lauric, myristic, palmitic, and stearic **acid**. The inorg. powder is preferably selected from Al_2O_3 , ZrO_2 , SiC , and Si_3N_4 . The binders are used in injection or extrusion molding of the ceramic powder, show high packing rate of the powder and short degreasing time of the molded parts, and the sintered bodies are homogeneous and have high d. Thus, 50.8 g dipentaerythritol was mixed with 170.7 g stearic **acid**, and p-toluenesulfonic **acid**, and kept at 220.degree. for 2 h with stirring to give 210 g dipentaerythritol tristearate (I). Then 130 g I and 1000 g powd. Al_2O_3 contg. 0.1% MgO were mixed, kneaded with rolls at 130-140, and ground to give powder. The powder 3 g was extruded at 20 kg/cm² to give a sheet, degreased and calcined at 800.degree. for 1.5 h, and fired in vacuo at 1775.degree. to give a sintered sheet with 39% light transmission.

L15 ANSWER 47 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1986:462322 CAPLUS
 DOCUMENT NUMBER: 105:62322
 TITLE: Acrylate compounds
 INVENTOR(S): Kamiide, Kazuo; Shimomura, Takatoshi; Yamazaki, Takeshi; Moriyuki, Masatoshi
 PATENT ASSIGNEE(S): Koei Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61001642	A2	19860107	JP 1984-121038	19840613
JP 04075904	B4	19921202		

OTHER SOURCE(S): CASREACT 105:62322
 AB $RC(CH_2O_2CCR_1:CH_2)2CH_2OCH_2C(CH_2O_2CCR_1:CH_2)2R$ (I; $R = Me, Et$; $R_1 = H, Me$), useful as UV- or electron ray-curing paints, adhesives, and printing inks, are prepd. Thus, 100 g **ditrimethylolpropane** and 173 g acrylic **acid** were refluxed in benzene in presence of H_2SO_4 , $CuSO_4$, and hydroquinone under stirring with 20 mL/min air feeding to give 150 g I ($R = Et, R_1 = H$), 95 parts of which was mixed with 3 parts benzophenone and 2 parts dimethylaminoethanol, then painted on a poly(vinyl chloride) plate, ABS plate, and polycarbonate plate uniformly and cured by 50 W/cm² high-pressure Hg lamp irradsn. for 20 s. The cured films showed JIS K

5401-1969 pencil hardness 7H, cross-cut adhesion 100/100, and excellent abrasion resistance.

L15 ANSWER 48 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1986:208907 CAPLUS
DOCUMENT NUMBER: 104:208907
TITLE: Unsaturated polyesters
INVENTOR(S): Fischer, Herbert; Wegemund, Bernd; Gorzinski, Manfred;
Gress, Wolfgang
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Fed. Rep. Ger.
SOURCE: Ger. Offen., 16 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3425183	A1	19860116	DE 1984-3425183	19840709
EP 167962	A2	19860115	EP 1985-108157	19850701
EP 167962	A3	19871014		
EP 167962	B1	19890927		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
AT 46709	E	19891015	AT 1985-108157	19850701
JP 61036322	A2	19860221	JP 1985-152141	19850709
US 4622382	A	19861111	US 1985-753194	19850709
PRIORITY APPLN. INFO.:			DE 1984-3425183	19840709
			EP 1985-108157	19850701

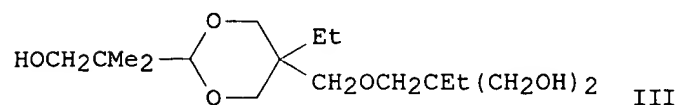
AB Low-viscosity unsatd. polyesters are prepd. from unsatd. alcs., di- and/or tricarboxylic acids, and polyols with functionality >2. Thus, HD Ocenol (C16-18 unsatd. alc., I no. 150-170, OH no. 223) 504, tetrahydrophthalic anhydride 304, **ditrimethylolpropane** 125, and Sn powder 2.8 g were heated in 100 mL xylene until the **acid** no. was <5. The Koenig pendulum hardness of a clear coating of this polyester was 14, 22, and 60 after 1, 7, and 14 days, resp.

L15 ANSWER 49 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1986:90616 CAPLUS
DOCUMENT NUMBER: 104:90616
TITLE: Radiation-curable unsaturated carboxylic acid esters
PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60130583	A2	19850712	JP 1983-238923	19831220
JP 03072219	B4	19911118		

GI



AB The title compds. are prepd. by the reaction of (meth)acrylic **acid** with the condensates of 2,2-dimethyl-3-hydroxypropanal (I) with dipentaerythritol or **ditrimethylolpropane** (II). Thus, I and II were condensed to give III, mixed (534.6 parts) with acrylic **acid**

415.1, H2SO4 14, hydroquinone 3.2, benzene 448, and cyclohexane 112 parts, heated to 80-87.degree. with removal of 86.4 parts water to give 643.2 parts liq. acrylate, mixed (70 parts) with 30 parts Epikote 828 acrylate and 3 parts Darocur 1173, coated on steel, and irradiated with UV with hardening time 1.4 s.

L15 ANSWER 50 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1976:5930 CAPLUS
 DOCUMENT NUMBER: 84:5930
 TITLE: Plasticizers for synthetic resins
 INVENTOR(S): Wakatsuki, Kinji; Sugioka, Michiyoshi
 PATENT ASSIGNEE(S): Adeka Argus Chemical Co., Ltd., Japan
 SOURCE: Japan. Kokai, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50094044	A2	19750726	JP 1973-137118	19731204
JP 53043978	B4	19781124		

AB A synthetic resin compn. is prepd., contg. lower fatty acid esters of diglycerol, triglycerol, pentaerythritol, dipentaerythritol, trimethylolpropane, **ditrimethylolpropane**, trimethylolethane, ditrimethylolethane, sorbitol, mannitol, and(or) tris(2-hydroxyethyl) isocyanurate. Thus, acetyl cellulose [9004-35-7] was dissolved in 90:10 CH2Cl2-MeOH mixed solvent to give a 15% soln. which was mixed with 10% (based on acetylcellulose) diglycerol tetraacetate [57348-99-9] and cast to give film (0.1 mm) give bleeding resistances and folding endurance than that plasticized with di-Et phthalate or triacetin.

L15 ANSWER 51 OF 52 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1975:580207 CAPLUS
 DOCUMENT NUMBER: 83:180207
 TITLE: Organic compositions containing phosphites
 INVENTOR(S): Minagawa, Motonobu; Nakahara, Yutaka; Haruna, Toru
 PATENT ASSIGNEE(S): Adeka Argus Chemical Co., Ltd., Japan
 SOURCE: Japan. Kokai, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50040476	A2	19750414	JP 1973-77211	19730709
JP 57042671	B4	19820909		

GI For diagram(s), see printed CA Issue.

AB Org. compns. contained phosphites I (R = Me, Et, R3, R4 = OP(OR5)R6 or R7; R1, R2, R5 = H, alkyl, cycloalkyl, aryl, alkylaryl, arylalkyl, R8, polyol residue, polyhydroxy phenol residue; R6, R9 = polyol or polyhydroxy phenol residue; n, 1 = 0-20). The I were heat stabilizers for PVC [9002-86-2], polypropylene [9003-07-0], ABS [9003-56-9], ethylene-vinyl acetate polymer [24937-78-8], polyoxyphenylene, polycarbonate, and mineral oil. For example, triphenyl phosphite [101-02-0] was stirred with (HOCH2)2C(Et)CH2OCH2C(Et)(CH2OH)2 [23235-61-2] in the presence of K2CO3 at 127-31.degree. and heated at 100.degree./4 mm Hg to give I (R = Et, R1 = R2 = Ph, n = 1 = 0) (II) [56742-53-1]. II was better heat stabilizer than tris(nonylphenyl) phosphite or distearyl pentaerythritol diphosphite. Also prepd. were, e.g., I(R = Et, R1 = R2 = nonylphenyl, n = 1 = 0) [56769-27-8], I(R = Et, R1 = R2 = CH2CO2C18H37, n = 1 = 0) [56742-54-2], I(R = Et, R1 = C18H37, R2 = Ph, n = 1 = 0) [56742-55-3], and I [R = Et, R1 = R2 = 4-[1-(5-tert-butyl-4-hydroxy-2-methylphenyl)butyl]-2-tert-butyl-5-methylphenyl, n = 1 = 0] [56742-56-4].

recommended. After neutralization with NaOH or CaO, the org. fraction is distd. from the highly contaminated wastewater. The COD of the **still residue** is <3500 mg L-1, equiv. to >80% removal. The residues are suitable for biol. treatment after a 2-fold diln. with slightly contaminated wastewater. The distillate is incinerated.

L19 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1968:441053 CAPLUS
DOCUMENT NUMBER: 69:41053
TITLE: Composition of products of etriol (trimethylolpropane) synthesis
AUTHOR(S): Prokorenko, N. A.; Mal'tinskaya, S. M.; Dement'eva, M. I.
SOURCE: Gazov. Khromatogr. (1967), No. 5 100-5
From: Ref. Zh., Khim. 1968, Abstr. No. 1G184
CODEN: GAKHA3
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB A method was developed for the sepn., identification, and quant. detn. of products of etriol (I) synthesis at 180.degree. on a column (2 m. .times. 6 mm.), packed (5:100) with polyethylene glycol adipate, dibutylene glycol succinate, or neopentyl glycol succinate, on INZ-600 brick, at a He carrier gas rate of 320 ml./min.; the temp. of the sample injection system was 300.degree. and a katharometer was used. The abs. error was 0.2-2.0%. The retention time of 7 impurities is given. For the anal. of products contg. **still residue**, sulfolane was the internal standard. Traces of ethylacrolein, **formal**, and the monomethyl ether of I, dimethylolpropane, and aldehyde alcs. were detd. at 180.degree. on a column (2 m. .times. 6 mm.), packed (5:100) with polyethylene glycol adipate on INZ-600 brick at a He carrier gas rate of 180 ml./min. The impurities were concd. first by quadruple recrystn. of the specimen.

L19 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1955:64804 CAPLUS
DOCUMENT NUMBER: 49:64804
ORIGINAL REFERENCE NO.: 49:12450c-i,12451a
TITLE: Organic phosphorus compounds. III. Reactions of methanephosphonyl dichloride with diols
AUTHOR(S): McKay, A. F.; Bannard, R. A. B.; Braun, R. O.; Benness, R. L.
CORPORATE SOURCE: Defence Research Chem. Labs., Ottawa, Can.
SOURCE: J. Am. Chem. Soc. (1954), 76, 3546-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 48, 11302g. Glycols gave with MePOCl₂ (I) heterocyclic structures contg. the phosphonate group. I treated with D(-)-[MeCH(OH)]₂ (II) in the presence of Et₂O and pyridine gave 2,4,5-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclopentane (III) and an optically active compd. which was identified by the degradation with PCl₅ as MeP(O)[OCHMeCH(OH)Me]OCMe: CHMe (IV). CH₂[CH(OH)Me]₂ (50 g.) added during 16 min. with stirring to 62.8 g. I in 245 g. refluxing CH₂Cl₂, the mixt. refluxed 4 hrs., evapd., and the residue fractionated yielded 62.9 g. (87%) 2,4,6-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclohexane (V), b_{0.85} 99.degree., solidifying in the receiver to a white cryst. solid. MeCH(OH)CH₂CH₂OH (42.8 g.) added to 62.3 g. I in 244 g. refluxing CH₂Cl₂ gave similarly 46.1 g. (69.7%) 2,6-dimethyl analog of V, b_{0.25} 71.degree., m. 40.degree.. (CH₂CH₂OH)₂ (22.5 g.) added to 33.3 g. I in 100 cc. refluxing CH₂Cl₂, the mixt. refluxed 20 hrs., evapd. in vacuo, and the residual yellow oil (38.7 g.) distd. in vacuo gave 20.8 g. (55.5%) solid, which, redistd. in vacuo, yielded 17.0 g. (45.3%) 2-methyl-2-oxo-1,3-dioxo-2-phosphacycloheptane white crystals, m. 68.5-70.degree.; the residual brown oil (17.5 g.) from the 1st distn. hydrolyzed, and the hydrolysis product recrystd. from EtAc and decolorized with C gave pure MeP(O)(OH)₂. Cl(CH₂)₂OH (161.0 g.) added during 25 min. to 133.0 g. I in 300 cc. dry refluxing CH₂Cl₂, the mixt. refluxed with stirring overnight, the solvent evapd. in vacuo at 65.degree., and the light yellow oily residue (215.1 g.) fractionated

yielded 46.8 g. distillate, b0.1 90.degree., and 150.9 g. distillate, b0.05 90-100.degree.; the 1st fraction carefully refractionated yielded 10.6 g. (6.3%) pure MeP(O)(OH)O(CH2)2Cl, b0.1 68-9.degree., n24.8D 1.4196, d23.5 1.355; the 2nd fraction refractionated gave 135.2 g. (61.3%) pure MeP(O)(OCH2CH2Cl)2, b0.075 98-100.degree., n24.8D 1.4645, d25.8 1.355. II (135 g.) in 100 cc. dry Et2O added with stirring to 238 g. dry pyridine and 200 g. I in 400 cc. refluxing CH2Cl2, the mixt. refluxed 1.5 hrs., held overnight at room temp., the pptd. pyridine-HCl filtered off in a dry box, washed with six 100-cc. portions of Et2O, the combined filtrate and washing evapd. in vacuo, and the pale oily residue (191 g.) carefully fractionated gave 60.1 g. (38.7%) IV, b0.03 58-68.degree., n24.8 1.4372, d26 1.080, [.alpha.]24.8D -98.4.degree. (refractionated, [.alpha.]24.8D -103.0.degree.), and 120 g. (53.3%) III, b0.3 82-4.degree., colorless oil which soon solidified, m. 43-5.degree.. IV (4.9 g.) refluxed 20 min. with 25 cc. 10% aq. H2SO4, the mixt. treated with 3 g. trioxymethylene, the **formal** deriv. of II removed as formed with an esterification app., and the aq. layer satd. with K2CO3 yielded 1.9 g. (103%) D(-)-4,5-dimethyl-1,3-dioxolane (VI), which, dried with K2CO3 and redistd., gave pure VI, b760 94-6.degree., n25D 1.3952, d25 0.933, [.alpha.]25D -24.30.degree.. IV (33.2 g.) treated with stirring with 93.5 g. PCl5 at such a rate as to maintain a temp. of 50-60.degree. during 55 min., and the mixt. heated 2.5 hrs. at 70.degree. and allowed to stand overnight gave 6.2 g. HCl and 5.5 g. MeCH:CClMe (VII) in attached alkali and ice-water traps, resp.; the main liquid product in the flask (115 g.) fractionated yielded 2.04 g. VII, 4.26 g. PCl3, and 80.2 g. mixt. of POCl3 and (MeCHCl)2 (VIII); the total yield of VII, colorless liquid, b. 62-8.degree., n25D 1.4231, was 7.54 g. (55.5%). The POCl3-VIII mixt., b. 105-12.degree., hydrolyzed with H2O and extd. with Et2O, and the ext. dried with Na2SO4 and fractionated gave 12.2 g. (64.0%) D(-)-VIII, b. 117-19.5.degree., n25D 1.4407, d25 1.092, [.alpha.]25D -13.9.degree.; the aq. hydrolyzate contained the P equiv. of 66.6 g. (96.7%) POCl3. The **still residue** (20.1 g.) from the original distn. gave 11.6 g. (58.2%) I, b9 49.5-53.degree., d25.3 1.445, which was quantitatively hydrolyzed to MeP(O)(OH)2, m. 108-9.degree..

=> s formal and acid decompos?

19376 FORMAL
3027461 ACID
124382 DECOMPOS?
1034 ACID DECOMPOS?
(ACID(W) DECOMPOS?)

L20 1 FORMAL AND ACID DECOMPOS?

=> d

L20 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
AN 1977:25619 CAPLUS
DN 86:25619
TI Determination of chromium(VI) in **acid-decomposable**
materials
AU Piriyutko, M. M.; Kostyrev, T. G.
CS Inst. Khim. Silik. im. Grebenshchikova, Leningrad, USSR
SO Zavod. Lab. (1976), 42(10), 1169-70
CODEN: ZVDLAU
DT Journal
LA Russian

=> d all

L20 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
AN 1977:25619 CAPLUS
DN 86:25619
TI Determination of chromium(VI) in **acid-decomposable**
materials
AU Piriyutko, M. M.; Kostyrev, T. G.

CS Inst. Khim. Silik. im. Grebenshchikova, Leningrad, USSR
SO Zavod. Lab. (1976), 42(10), 1169-70
CODEN: ZVDLAU
DT Journal
LA Russian
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72
AB The **formal** redox potentials of Cr(VI)/Cr(III) and Fe(III)/Fe(II) systems were measured and Cr(VI) stability in acids was studied to choose conditions for Cr(VI) detn. To maintain the valence of Cr(VI) after sample dissoln. at 25.degree. (or at b.p.) the max. permissible acid concns. are HCl 3.4 (2), H2SO4 12 (3), and HF 21.5N (18N). At acid concns. higher than those, Cr(VI) must be detd. indirectly, e.g. from Fe(II) excess. To det. Cr(VI) in Ca germanate, a 0.1-0.2-g sample was dissolved under CO2 atm. by boiling with concd. HCl in the presence of a small amt. of Fe(III) and an excess of Fe(II). After cooling, dil. H3PO4 and Na diphenylaminesulfonate were added and Fe(II) was titrated with 0.01N K2Cr2O7. The mean std. deviation in the detn. of 0.31-1.42% CrO3 was 0.035%. The method is not suitable for Cr(VI) detn. in the presence of Cr(V) and Cr(IV).
ST chromium 6 detn acid decompn; redox potential chromium iron; calcium germanate analysis chromium
IT Electric potential
(redox, **formal**, of chromium and iron in acid solns.)
IT 50814-00-1
RL: AMX (Analytical matrix); ANST (Analytical study)
(chromium detn. in, redox titrimetric)
IT 7440-47-3, analysis
RL: ANST (Analytical study)
(detn. of hexavalent, in **acid-decomposable** materials, redox titrimetric)

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117-19.5.degree., n_{25D} 1.4407, d₂₅ 1.092, [α]_{25D} -13.9.degree.; the aq. hydrolyzate contained the P equiv. of 66.6 g. (96.7%) POCl₃. The still residue (20.1 g.) from the original distn. gave 11.6 g. (58.2%) I, b₉ 49.5-53.degree., d_{25.3} 1.445, which was quantitatively hydrolyzed to MeP(O)(OH)₂, m. 108-9.degree..

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AN 1955:64804 CAPLUS

DN 49:64804

OREF 49:12450c-i,12451a

TI Organic phosphorus compounds. III. Reactions of methanephosphonyl dichloride with diols

AU McKay, A. F.; Bannard, R. A. B.; Braun, R. O.; Benness, R. L.

CS Defence Research Chem. Labs., Ottawa, Can.

SO J. Am. Chem. Soc. (1954), 76, 3546-8

DT Journal

LA Unavailable

CC 10 (Organic Chemistry)

AB cf. C.A. 48, 11302g. Glycols gave with MePOCl_2 (I) heterocyclic structures contg. the phosphonate group. I treated with $\text{D}(-)-[\text{MeCH}(\text{OH})]_2$ (II) in the presence of Et_2O and pyridine gave 2,4,5-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclopentane (III) and an optically active compd. which was identified by the degradation with PCl_5 as $\text{MeP}(\text{O})[\text{OCHMeCH}(\text{OH})\text{Me}]\text{OCMe}$: CHMe (IV). $\text{CH}_2[\text{CH}(\text{OH})\text{Me}]_2$ (50 g.) added during 16 min. with stirring to 62.8 g. I in 245 g. refluxing CH_2Cl_2 , the mixt. refluxed 4 hrs., evapd., and the residue fractionated yielded 62.9 g. (87%) 2,4,6-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclohexane (V), $b_{0.85}$ 99.degree., solidifying in the receiver to a white cryst. solid. $\text{MeCH}(\text{OH})\text{CH}_2\text{CH}_2\text{OH}$ (42.8 g.) added to 62.3 g. I in 244 g. refluxing CH_2Cl_2 gave similarly 46.1 g. (69.7%) 2,6-dimethyl analog of V, $b_{0.25}$ 71.degree., m. 40.degree.. $(\text{CH}_2\text{CH}_2\text{OH})_2$ (22.5 g.) added to 33.3 g. I in 100 cc. refluxing CH_2Cl_2 , the mixt. refluxed 20 hrs., evapd. in vacuo, and the residual yellow oil (38.7 g.) distd. in vacuo gave 20.8 g. (55.5%) solid, which, redistd. in vacuo, yielded 17.0 g. (45.3%) 2-methyl-2-oxo-1,3-dioxo-2-phosphacycloheptane white **crystals**, m. 68.5-70.degree.; the residual brown oil (17.5 g.) from the 1st distn. hydrolyzed, and the hydrolysis product recrystd. from EtAc and decolorized with C gave pure $\text{MeP}(\text{O})(\text{OH})_2$. $\text{Cl}(\text{CH}_2)_2\text{OH}$ (161.0 g.) added during 25 min. to 133.0 g. I in 300 cc. dry refluxing CH_2Cl_2 , the mixt. refluxed with stirring overnight, the **solvent** evapd. in vacuo at 65.degree., and the light yellow oily residue (215.1 g.) fractionated yielded 46.8 g. distillate, $b_{0.1}$ 90.degree., and 150.9 g. distillate, $b_{0.05}$ 90-100.degree.; the 1st fraction carefully refractionated yielded 10.6 g. (6.3%) pure $\text{MeP}(\text{O})(\text{OH})\text{O}(\text{CH}_2)_2\text{Cl}$, $b_{0.1}$ 68-9.degree., $n_{24.8\text{D}}$ 1.4196, $d_{23.5}$ 1.355; the 2nd fraction refractionated gave 135.2 g. (61.3%) pure $\text{MeP}(\text{O})(\text{OCH}_2\text{CH}_2\text{Cl})_2$, $b_{0.075}$ 98-100.degree., $n_{24.8\text{D}}$ 1.4645, $d_{25.8}$ 1.355. II (135 g.) in 100 cc. dry Et_2O added with stirring to 238 g. dry pyridine and 200 g. I in 400 cc. refluxing CH_2Cl_2 , the mixt. refluxed 1.5 hrs., held overnight at room temp., the pptd. pyridine-HCl filtered off in a dry box, washed with six 100-cc. portions of Et_2O , the combined filtrate and washing evapd. in vacuo, and the pale oily residue (191 g.) carefully fractionated gave 60.1 g. (38.7%) IV, $b_{0.03}$ 58-68.degree., $n_{24.8}$ 1.4372, d_{26} 1.080, $[\alpha]_{24.8\text{D}}$ -98.4.degree. (refractionated, $[\alpha]_{24.8\text{D}}$ -103.0.degree.), and 120 g. (53.3%) III, $b_{0.3}$ 82-4.degree., colorless oil which soon solidified, m. 43-5.degree.. IV (4.9 g.) refluxed 20 min. with 25 cc. 10% aq. H_2SO_4 , the mixt. treated with 3 g. trioxymethylene, the **formal** deriv. of II removed as formed with an esterification app., and the aq. layer satd. with K_2CO_3 yielded 1.9 g. (103%) $\text{D}(-)-4,5$ -dimethyl-1,3-dioxolane (VI), which, dried with K_2CO_3 and redistd., gave pure VI, b_{760} 94-6.degree., $n_{25\text{D}}$ 1.3952, d_{25} 0.933, $[\alpha]_{25\text{D}}$ -24.30.degree.. IV (33.2 g.) treated with stirring with 93.5 g. PCl_5 at such a rate as to maintain a temp. of 50-60.degree. during 55 min., and the mixt. heated 2.5 hrs. at 70.degree. and allowed to stand overnight gave 6.2 g. HCl and 5.5 g. MeCH:CClMe (VII) in attached alkali and ice-water traps, resp.; the main liquid product in the flask (115 g.) fractionated yielded 2.04 g. VII, 4.26 g. PCl_3 , and 80.2 g. mixt. of POCl_3 and $(\text{MeCHCl})_2$ (VIII); the total yield of VII, colorless liquid, b. 62-8.degree., $n_{25\text{D}}$ 1.4231, was 7.54 g. (55.5%). The POCl_3 -VIII mixt., b. 105-12.degree., hydrolyzed with H_2O and extd. with Et_2O , and the ext. dried with Na_2SO_4 and fractionated gave 12.2 g. (64.0%) $\text{D}(-)$ -VIII, b. 117-19.5.degree., $n_{25\text{D}}$ 1.4407, d_{25} 1.092, $[\alpha]_{25\text{D}}$ -13.9.degree.; the aq. hydrolyzate contained the P equiv. of 66.6 g. (96.7%) POCl_3 . The **still residue** (20.1 g.) from the original distn. gave

11.6 g. (58.2%) I, b₉ 49.5-53.degree., d_{25.3} 1.445, which was quantitatively hydolyzed to MeP(O)(OH)₂, m. 108-9.degree..

=>

L15 ANSWER 12 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:481567 CAPLUS

DOCUMENT NUMBER: 131:145809

TITLE: Mat coating and writing sheet of the white sheet made from the same

INVENTOR(S): Hirai, Toshimasa; Hirabayashi, Masato; Akutsu, Mikio

PATENT ASSIGNEE(S): Chiyoda Integral K. K., Japan; Kashuu K. K.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11209650	A2	19990803	JP 1998-16171	19980128
JP 2983947	B2	19991129		

AB The cured coating, showing good durability and good chem. resistance, comprises a polyethylene-coated silica (I) and a UV light curable a 1st monomer of dipentaerythritol hexaacrylate (II), dipentaerythritol pentaacrylate, dipentaerythritol tetraacrylate, pentaerythritol tetraacrylate, pentaerythritol triacrylate and/or **ditrimethylolpropane** tetraacrylate. Thus, a coating was made from a mixt. of isocyanuric **acid** ethylene oxide-modified triacrylate 70, II 30, benzophenone and 1-hydroxycyclohexylphenylketone mixt. 8, I 7.5, BYK 310 (polyether-modified polydimethylsiloxane) 0.8 and Me iso-Bu ketone 90 parts.

L15 ANSWER 13 OF 52 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:460448 CAPLUS

DOCUMENT NUMBER: 131:89159

TITLE: Epoxy group-containing copolymers from ethylenically unsaturated monomers and powder coatings based on these polymers and cured by mixtures of acidic polyesters and dicarboxylic acids

INVENTOR(S): De Cock, Christian Jean Charles; Gerets, Carine Helena Paula

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933889	A1	19990708	WO 1998-EP7331	19981111
W: BR, CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
BR 9814408	A	20001010	BR 1998-14408	19981111
EP 1042379	A1	20001011	EP 1998-965160	19981111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
US 6228941	B1	20010508	US 1998-189571	19981111
PRIORITY APPLN. INFO.:			EP 1997-204114	A 19971224
			WO 1998-EP7331	W 19981111

AB Powder coating compns., curable at 120-140.degree., contain (a) a copolymer obtainable from (ai) an alkyl diester of an ethylenically unsatd. dicarboxylic **acid**, comprising an alkyl group, having from 1 to 4 carbon atoms; (aii) a glycidyl ester of ethylenically unsatd. carboxylic **acid**; (aiii) a phenylalkylene monomer having from 8

=> d all

L24 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS

AN 1955:64804 CAPLUS

DN 49:64804

OREF 49:12450c-i,12451a

TI Organic phosphorus compounds. III. Reactions of methanephosphonyl dichloride with diols

AU McKay, A. F.; Bannard, R. A. B.; Braun, R. O.; Benness, R. L.

CS Defence Research Chem. Labs., Ottawa, Can.

SO J. Am. Chem. Soc. (1954), 76, 3546-8

DT Journal

LA Unavailable

CC 10 (Organic Chemistry)

AB cf. C.A. 48, 11302g. Glycols gave with MePOCl_2 (I) heterocyclic structures contg. the phosphonate group. I treated with $\text{D}(-)\text{-[MeCH(OH)]}_2$ (II) in the presence of Et_2O and pyridine gave 2,4,5-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclopentane (III) and an optically active compd. which was identified by the degradation with PCl_5 as $\text{MeP(O)[OCHMeCH(OH)Me]OCMe}$: CHMe (IV). $\text{CH}_2[\text{CH(OH)Me}]_2$ (50 g.) added during 16 min. with stirring to 62.8 g. I in 245 g. refluxing CH_2Cl_2 , the mixt. refluxed 4 hrs., evapd., and the residue fractionated yielded 62.9 g. (87%) 2,4,6-trimethyl-2-oxo-1,3-dioxo-2-phosphacyclohexane (V), $b_{0.85}$ 99.degree., solidifying in the receiver to a white cryst. solid. $\text{MeCH(OH)CH}_2\text{CH}_2\text{OH}$ (42.8 g.) added to 62.3 g. I in 244 g. refluxing CH_2Cl_2 gave similarly 46.1 g. (69.7%) 2,6-dimethyl analog of V, $b_{0.25}$ 71.degree., m. 40.degree.. $(\text{CH}_2\text{CH}_2\text{OH})_2$ (22.5 g.) added to 33.3 g. I in 100 cc. refluxing CH_2Cl_2 , the mixt. refluxed 20 hrs., evapd. in vacuo, and the residual yellow oil (38.7 g.) distd. in vacuo gave 20.8 g. (55.5%) solid, which, redistd. in vacuo, yielded 17.0 g. (45.3%) 2-methyl-2-oxo-1,3-dioxo-2-phosphacycloheptane white **crystals**, m. 68.5-70.degree.; the residual brown oil (17.5 g.) from the 1st distn. hydrolyzed, and the hydrolysis product recrystd. from EtAc and decolorized with C gave pure MeP(O)(OH)_2 . $\text{Cl(CH}_2)_2\text{OH}$ (161.0 g.) added during 25 min. to 133.0 g. I in 300 cc. dry refluxing CH_2Cl_2 , the mixt. refluxed with stirring overnight, the **solvent** evapd. in vacuo at 65.degree., and the light yellow oily residue (215.1 g.) fractionated yielded 46.8 g. **distillate**, $b_{0.1}$ 90.degree., and 150.9 g. **distillate**, $b_{0.05}$ 90-100.degree.; the 1st fraction carefully refractionated yielded 10.6 g. (6.3%) pure $\text{MeP(O)(OH)O(CH}_2)_2\text{Cl}$, $b_{0.1}$ 68-9.degree., $n_{24.8D}$ 1.4196, $d_{23.5}$ 1.355; the 2nd fraction refractionated gave 135.2 g. (61.3%) pure $\text{MeP(O)(OCH}_2\text{CH}_2\text{Cl})_2$, $b_{0.075}$ 98-100.degree., $n_{24.8D}$ 1.4645, $d_{25.8}$ 1.355. II (135 g.) in 100 cc. dry Et_2O added with stirring to 238 g. dry pyridine and 200 g. I in 400 cc. refluxing CH_2Cl_2 , the mixt. refluxed 1.5 hrs., held overnight at room temp., the pptd. pyridine-HCl filtered off in a dry box, washed with six 100-cc. portions of Et_2O , the combined filtrate and washing evapd. in vacuo, and the pale oily residue (191 g.) carefully fractionated gave 60.1 g. (38.7%) IV, $b_{0.03}$ 58-68.degree., $n_{24.8}$ 1.4372, d_{26} 1.080, $[\alpha]_{24.8D}$ -98.4.degree. (refractionated, $[\alpha]_{24.8D}$ -103.0.degree.), and 120 g. (53.3%) III, $b_{0.3}$ 82-4.degree., colorless oil which soon solidified, m. 43-5.degree.. IV (4.9 g.) refluxed 20 min. with 25 cc. 10% aq. H_2SO_4 , the mixt. treated with 3 g. trioxymethylene, the **formal** deriv. of II removed as formed with an esterification app., and the aq. layer satd. with K_2CO_3 yielded 1.9 g. (103%) $\text{D}(-)\text{-4,5-dimethyl-1,3-dioxolane}$ (VI), which, dried with K_2CO_3 and redistd., gave pure VI, b_{760} 94-6.degree., n_{25D} 1.3952, d_{25} 0.933, $[\alpha]_{25D}$ -24.30.degree.. IV (33.2 g.) treated with stirring with 93.5 g. PCl_5 at such a rate as to maintain a temp. of 50-60.degree. during 55 min., and the mixt. heated 2.5 hrs. at 70.degree. and allowed to stand overnight gave 6.2 g. HCl and 5.5 g. MeCH:CClMe (VII) in attached alkali and ice-water traps, resp.; the main liquid product in the flask (115 g.) fractionated yielded 2.04 g. VII, 4.26 g. PCl_3 , and 80.2 g. mixt. of POCl_3 and $(\text{MeCHCl})_2$ (VIII); the total yield of VII, colorless liquid, b. 62-8.degree., n_{25D} 1.4231, was 7.54 g. (55.5%). The POCl_3 -VIII mixt., b. 105-12.degree., hydrolyzed with H_2O and extd. with Et_2O , and the ext. dried with Na_2SO_4 and fractionated gave 12.2 g. (64.0%) $\text{D}(-)$ -VIII, b.

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
 AN 1996:493947 CAPLUS
 DN 125:142111
 TI Preparation of trimethylolpropane and ditrimethylolpropane
 IN Doi, Kenji; Igarashi, Shinichi
 PA Koei Chemical Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08157401	A2	19960618	JP 1994-331144	19941207
OS	CASREACT 125:142111				

=> s jp 08157401/pn
 L6 1 JP 08157401/PN
 (JP08157401/PN)

=> d all

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
 AN 1996:493947 CAPLUS
 DN 125:142111
 TI Preparation of trimethylolpropane and ditrimethylolpropane
 IN Doi, Kenji; Igarashi, Shinichi
 PA Koei Chemical Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07C027-00
 ICS C07C027-04; C07C031-22
 CC 23-7 (Aliphatic Compounds)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08157401	A2	19960618	JP 1994-331144	19941207 <--
OS	CASREACT 125:142111				

AB Trimethylolpropane (I) and ditrimethylolpropane (II) are prepd. by treating PrCHO with HCHO in the presence of hydroxides of alkali metal or alk. earth metal in mixed solvents contg. H2O and water-insol. or hardly sol. org. solvents having distribution coeff. of II .gtoreq.1. A mixt. of HCHO I in H2O-2-ethylhexanol (distribution coeff. of II 1.786) was treated dropwise with aq. NaOH at 40.degree. over 15 min, then treated dropwise with aq. NaOH, aq. HCHO, and aq. PrCHO at 40.degree. and at the same time over 6 h to give 66.8% I and 23.4% II.

ST methylolpropane prepn; propane trimethylol prepn; butyraldehyde hydroxymethylation formaldehyde

IT Alkali metal hydroxides
 Alkaline earth hydroxides
 RL: RCT (Reactant)

(prepn. of (di)trimethylolpropane from PrCHO and HCHO in H2O-org. solvent using hydroxide of alkali or alk. earth metal)

IT 77-99-6P, Trimethylolpropane 23235-61-2P, Ditrimethylolpropane
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of (di)trimethylolpropane from PrCHO and HCHO in H2O-org. solvent using hydroxide of alkali or alk. earth metal)

IT 104-76-7, 2-Ethylhexanol 112-53-8, 1-Dodecanol 143-08-8, 1-Nonanol 1120-06-5, 2-Decanol

RL: NUU (Nonbiological use, unclassified); USES (Uses)
 (prepn. of (di)trimethylolpropane from PrCHO and HCHO in H2O-org. solvent using hydroxide of alkali or alk. earth metal)

IT 50-00-0, Formaldehyde, reactions 123-72-8, Butyraldehyde 1310-73-2,
Sodium hydroxide, reactions
RL: RCT (Reactant)
(prepn. of (di)trimethylolpropane from PrCHO and HCHO in H₂O-org.
solvent using hydroxide of alkali or alk. earth metal)
